

TABLE 1.—Solar radiation intensities during April, 1925

Washington, D. C.

(Gram-calories per minute per square centimeter of normal surface)

Date	Sun's zenith distance										Local mean solar time	
	8 a.m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°		Noon
	75th mer. time	Air mass										
		A. M.					P. M.					
		e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0		5.0
	<i>mm.</i>	<i>cal.</i>	<i>cal.</i>	<i>cal.</i>	<i>cal.</i>	<i>cal.</i>	<i>cal.</i>	<i>cal.</i>	<i>cal.</i>	<i>cal.</i>	<i>mm.</i>	
April 3	5.16				1.10	1.32					4.37	
4	5.56										4.57	
6	2.62					1.42					2.87	
7	4.75		0.97		1.12	1.54	1.23	1.04	0.95	0.89	2.26	
8	5.16					1.13					4.37	
9	3.63	0.64	0.75	0.89	1.06	1.28					3.81	
11	7.04			0.67	0.87	1.15					6.27	
13	3.15					1.46	0.98				3.30	
15	12.24				0.91						10.97	
17	5.79		0.51	0.65							5.16	
21	2.49	0.87	0.96	1.08	1.17						3.15	
24	13.61					1.05					15.65	
27	11.81				0.95	1.32					10.97	
Means		(0.76)	0.80	0.82	1.03	1.30	(1.10)	(1.04)	(0.95)	(0.89)		
Departures		+0.06	+0.05	-0.05	-0.03	-0.05	+0.01	+0.14	+0.20	+0.29		

Madison, Wis.

April 1	2.74					1.14				2.87
2	3.15				1.08					3.30
4	3.00			1.10	1.29	1.54	1.25			3.63
6	4.17				1.20		1.18			2.74
10	5.16					1.29	1.03			6.76
16	3.81				1.18					3.63
23	11.81				0.85					14.10
25	8.81			0.94	1.12	1.33				11.38
28	4.17			0.98	1.16					5.16
Means				1.01	1.13	1.39	1.15			
Departures				-0.08	-0.09	-0.02	-0.07			

## WEATHER OF NORTH AMERICA AND ADJACENT OCEANS

## NORTH ATLANTIC OCEAN

By F. A. YOUNG

The following table shows the average sea-level pressure for the month at a number of land stations on the coast and islands of the North Atlantic. The readings are for 8 a. m. 75th meridian time, and the departures are only approximate, as the normals were taken from the Pilot Chart and are based on Greenwich mean noon observations, which correspond to those taken at 7 a. m. 75th meridian time.

Station	Average pressure	Departure
	Inches	Inches
St. Johns, Newfoundland	29.86	-0.01
Nantucket	30.01	+0.03
Hatteras	30.02	+0.01
Key West	29.99	-0.03
New Orleans	30.03	+0.03
Swan Island	29.87	-0.11
Turks Island	30.00	-0.02
Bermuda	30.08	+0.08
Horta, Azores	30.23	+0.12
Lerwick, Shetland Islands	29.73	-0.07
Valencia, Ireland	29.86	-0.03
London	29.86	-0.01

It will be seen from the above table that there were no unusually large departures, although the average pressure for the month was somewhat higher than usual at Horta and slightly lower at Lerwick, denoting that both the Azores HIGH and Icelandic LOW were fairly well developed.

TABLE 1.—Solar radiation intensities during April, 1925.—Con.

Lincoln, Nebr.

Date	8 a.m.	Sun's zenith distance									Noon	
		78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°		
		Air mass										Local mean solar time
		A. M.					P. M.					
		e.	5.0	4.0	3.0	2.0	*1.0	2.0	3.0	4.0		
April 21	mm.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm.	
25	10.97			0.76	0.99						12.24	
29	5.56			0.78	1.07	1.35					3.63	
Means	3.63	0.88	1.00	1.14	1.31	1.54					3.15	
Departures		+0.11	+0.15	-0.10	-0.09	-0.01						

\* Extrapolated.

TABLE 2.—Solar and sky radiation received on a horizontal surface

(Gram-calories per square centimeter of horizontal surface)

Week beginning—	Average daily radiation					Average daily departure from normal		
	Washington	Madison	Lincoln	Chicago	New York	Washington	Madison	Lincoln
	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.
Ap. 2	440	473	379	359	435	+51	+95	-59
9	447	418	444	276	416	+42	+27	+9
16	439	284	419	182	379	+19	-125	-19
23	338	461	526	344	337	-98	+30	+72
Deficiency since first of year on Apr. 29						-1,001	-1,596	-1,281

At Horta the barometric readings ranged from 30.62 inches on the 12th to 29.50 inches on the 30th, and at Lerwick from 30.16 inches on the 20th to 28.91 inches on the 15th.

The number of days with winds of gale force was considerably greater than usual over the western section of the steamer lanes. According to reports received up to date, the maximum number occurred in the 5-degree square between the 40th and 45th parallels and the 55th and 60th meridians, where gales were reported on 9 days. Conditions were apparently not far from normal over the territory north of the 45th parallel, east of the 35th meridian, with winds of gale force occurring on from 1 to 3 days.

The number of days with fog did not, on the whole, differ materially from the normal as shown on the Pilot Chart, the maximum amount occurring, as usual, on the Grand Banks, where fog was reported on 13 days.

The month began with moderate depressions over Nova Scotia and also off the northern coast of Europe. These lows both moved northeastward and were accompanied by no unusually heavy weather, except that on the 3d moderate northerly gales were encountered in the vicinity of Hatteras.

On the 4th there were two disturbances over the ocean; the first central near 40° N., 60° W., and the second, of much greater intensity, near 50° N., 20° W. By the 5th the western LOW was in the vicinity of Nova Scotia and western Newfoundland, and was surrounded by moderate winds. On the same date the eastern LOW was central about 5 degrees west of the southwest coast of Ireland,

and moderate to strong gales prevailed over the area between the 43d and 50th parallels and the 10th and 25th meridians.

Charts VIII to XIII cover the period from the 6th to 11th, inclusive, and an examination of these, together with the table of ocean gales and storms, will give an idea of conditions during this period.

On the 12th southerly gales prevailed over the region between the 35th and 45th parallels and the 50th and 60th meridians, and a few gale reports were received from vessels near the Azores and also off the coast of southern Europe.

On the 14th there were two well-developed disturbances over the ocean; the first central near 41° N., 50° W., and the second in the vicinity of Iceland, although the position of this second LOW was indeterminable due to lack of observations. They both moved slowly eastward, accompanied by moderate to strong gales, and on the 16th the center of the first was near 50° N., 32° W., and the second over the North Sea.

From the 17th to 19th moderate conditions were the rule over the ocean as a whole, although a few vessels in widely scattered localities reported moderate gales.

On the 20th there was a slight depression near Hatteras that afterwards developed into a severe disturbance. On the same date there was a second LOW of limited extent central near 53° N., 30° W., accompanied by southerly gales in the easterly quadrants; this moved rapidly northeastward, decreasing in force.

On the 21st and 22d the western LOW was central near 40° N., 55° W., and the storm area on both of these dates covered the greater part of the region between the 30th and 45th parallels, west of the 40th meridian.

On the 22d and 23d moderate gales were also encountered over the eastern section of the steamer lanes, as shown by report in table from Danish S. S. *United States*.

On the 23d St. Johns, Newfoundland, was near the center of the western disturbance, which remained nearly stationary during the next 24 hours, and then moved slowly east-southeastward, with a varying rate of translation, reaching the Azores by the end of the month. The storm area contracted and expanded from day to day, extending at times as far south as the 35th parallel, while the storm also varied considerably in intensity.

*Ocean gales and storms, April, 1925*

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Highest force of wind and direction	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
North Atlantic Ocean													
Canadian Leader, Br. S. S.	St. John, N. B.	Glasgow	50 00 N.	32 00 W.	4th	10a., 4th	5th	29.86	NW	NW, 8	NNW	-, 8	NW.-NNW.
Santa Marta, Am. S. S.	New York	Colon and return	28 50 N.	74 15 W.	6th	11p., 6th	7th	29.74	E	E, 7	NE	NE, 8	SE.-E.
Deuel, Am. S. S.	Norfolk	Bremen	47 48 N.	14 32 W.	4th	8a., 6th	6th	29.44	NNW	N, 7	N	-, 8	NNW.-N.
Cadillac, Br. S. S.	New York	Avonmouth	43 29 N.	41 13 W.	7th	5a., 7th	9th	29.65	NW	NNW, 4	W	NW, 10	NNW.-N.
Eastern Victor, Am. S. S.	do	Rotterdam	45 30 N.	31 45 W.	7th	4p., 7th	9th	29.40	S	WSW	NW	WNW, 9	S.-WSW.-W.
Nevada, Dan. S. S.	Newcastle	Philadelphia	55 57 N.	29 47 W.	8th	11a., 8th	9th	28.61	N	NW, 10	SW	NW, 10	Steady.
Andania, Br. S. S.	Cherbourg	New York	42 58 N.	45 10 W.	9th	2p., 9th	10th	29.20	SE	WSW	NNW	-, 9	SW.-W.-NW.
Abercosk, Am. S. S.	New Orleans	Liverpool	45 50 N.	32 00 W.	9th	11a., 10th	10th	29.38	S	SSW, 8	WNW	-, 8	SSW.-WNW.
Mount Clay, Am. S. S.	New York	Hamburg	40 10 N.	64 10 W.	10th	4a., 11th	12th	29.91	SW	SW	S	SSW, 8	Steady.
Roeper, Du. S. S.	Marseille	Quessant	46 45 N.	6 48 W.	12th	2p., 12th	12th	29.98	NW	S, 7	N	WNW, 8	Steady.
Am. Banker, Am. S. S.	New York	London	40 09 N.	48 23 W.	12th	8a., 12th	13th	29.98	S	SSW, 7	SSW	SSW, 8	Steady.
Caronia, Br. S. S.	Queenstown	New York	42 12 N.	57 24 W.	14th	7a., 14th	19th	29.86	N	N, 7	NE	-, 9	N.-NW.-NE.
Oscar II, Dan. S. S.	Oslo	do	57 05 N.	20 40 W.	14th	4p., 14th	15th	28.79	SW	SW, 7	NW	NW, 10	SW.-NW.
Boston City, Br. S. S.	Bristol	Philadelphia	45 30 N.	38 00 W.	16th	8a., 16th	16th	29.61	NW	NW, 5	NNW	NW, 9	Steady.
City of Cambridge, Br. S. S.	Swansea	New York	40 35 N.	65 30 W.	20th	4p., 20th	21st	29.69	N	N, 7	N	N, 10	NW.-N.
Kenbane Head, Br. S. S.	Greenock	Canada	53 05 N.	29 30 W.	20th	8p., 20th	21st	29.55	WSW	W, 8	W	W, 8	Steady.
Boston City, Br. S. S.	Bristol	Philadelphia	41 30 N.	60 00 W.	21st	2a., 21st	22d.	29.66	NNE	NNE, 9	N	NNE, 12	Steady.
Andalusier, Belg. S. S.	New York	Havre	42 32 N.	53 20 W.	20th	2a., 21st	25th	29.55	E	ENE, 8	S	SSW, 10	E.-ENE.
United States, Dan. S. S.	do	Christianssand	50 06 N.	38 20 W.	21st	4p., 21st	24th	29.91	N	N, 6	NW	-, 8	Steady.
Lapland, Br. S. S.	Gibraltar	New York	39 18 N.	62 35 W.	21st	2p., 21st	22d.	29.45	NE	N, 10	NE	NE, 12	Steady.
Saucon, Am. S. S.	Italy	do	38 41 N.	55 31 W.	22d.	1a., 23d.	24th	29.54	SW	SW, 9	NW	SW, 9	Steady.
Anaconda, Am. S. S.	English Channel	do	43 35 N.	44 02 W.	23d.	10a., 24th	24th	29.85	SSW	SW, 7	SW	-, 9	SSE.-SW.
Howick Hall, Br. S. S.	London	Baltimore	39 40 N.	44 50 W.	24th	8a., 26th	27th	29.35	S	Var. 9	NNW	-, 9	SSE.-SW.-NNW.
Montpellier, Am. S. S.	Colon	London	42 00 N.	35 00 W.	24th	6a., 27th	28th	29.14	SSW	SSE, 5	SSE	SSE, 10	S.-SSE.
Saguache, Am. S. S.	Rotterdam	Galveston	40 00 N.	32 30 W.	28th	11p., 28th	30th	29.50	W	W, 7	W	W, 8	W.-SW.-W.
Indian Ocean													
Port Campbell, Br. S. S.	London	Melbourne	43 17 S.	71 21 E.	1st	Mid., 1st	3d	28.43	W by N	W	W by S	-, 8	
Mahana, Br. S. S.	do	do	43 00 S.	48 40 E.	6th	10a., 6th	7th	29.48	SW	W, 4	WSW	WSW, 8	NW.-WNW.-W.-WSW.
Mediterranean Sea													
Egremont, Am. S. S.	Bombay	New York	31 38 N.	32 00 E.	2d	4p., 2d	4th	29.47	E	E, 6	NW	NW, 9	E.-N.-NW.
Red Sea													
Bengal Maru, Jap. S. S.	Calcutta	Suez	14 38 N.	41 55 E.	12th	4a., 13th	13th	29.71	ENE	S, 7	SSE	-, 8	ENE.-S.
North Pacific Ocean													
Victorious, Am. S. S.	Honolulu	Yokohama	*31 00 N.	*145 00 E.	2d	3a., 3d	3d	29.73	E	NE, 7	NE	ENE, 8	NE.-E.-NE.
Tenyo Maru, Jap. S. S.	Yokohama	San Francisco	34 33 N.	156 53 E.	3d	6a., 5th	5th	29.75	SE	SE, 7	S	S, 8	
Pres. McKinley, Am. S. S.	Victoria	Yokohama	47 00 N.	164 45 E.	4th	12p., 5th	7th	29.19	SW	SSW, 10	W	SSW, 10	SSE.-SSW.-W.
Taithybius, Br. S. S.	Puget Sound	do	47 35 N.	169 29 E.	4th	Noon, 6th	8th	29.33	WNW	SSW, 10	WNW	SSW, 10	SSW.-WSW.
Pres. Cleveland, Am. S. S.	San Francisco	Yokohama	33 N.	145 20 E.	5th	9a.	5th	29.18	SSW	SSW, 6	NNE	N, 10	SSW.-NNE.

\* Approximate.